



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/764,438

01/27/2004

Kenji Shiraishi

248078US2

8684

22850

7590

07/18/2008

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

PETERSON, CHRISTOPHER K

ART UNIT

PAPER NUMBER

2622

NOTIFICATION DATE

DELIVERY MODE

07/18/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/764,438	<b>Applicant(s)</b> SHIRAISHI ET AL.	
	<b>Examiner</b> CHRISTOPHER K. PETERSON	<b>Art Unit</b> 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6,8-10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8-10 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see Remarks / Arguments, pg. 6 - 9, filed 3 June 2008, with respect to the rejection(s) of claim(s) 1, 2, 4, 6, 8 - 10 and 12 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kokubo (US Patent 4,984,002).

### ***Claim Objections***

2. Claims 1, 5, and 9 are objected to because of the following informalities:

Claim 1 cites the limitation "wherein said timing part measures an elapsed time". The limitation "an elapsed time" was cited earlier in the claim. The claim should read "wherein said timing part measures the elapsed time".

Claims 5 and 9 cite the limitation "measuring an elapsed time". The limitation "an elapsed time" was cited earlier in the claim. The claim should read "measuring the elapsed time".

Claim 2, 4, 6, 8, 10, and 12 cite the limitation "the exposure setup". The limitation "the exposure setup" was not cited earlier in the claim or then independent claim. The claim should read "an exposure setup" or "the exposure setup operation". The Examiner will use the limitation "the exposure setup operation".

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**4. Claims 1, 2, 4 - 6, 8 - 10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kokubo (US Patent 4,984,002).**

As to claim 1, Kokubo (Fig. 2 and 4) teaches an imaging apparatus comprising:

- a setup part (sync. generator 5) for an exposure period configured to generate a timing signal (vertical sync. signal VD, horizontal sync. signal HD) which prescribes an exposure period of an image pick up device (CCD 1) (Col. 3, line 15 – 30);
- a control part (timing pulse generator circuit 6) for the image pickup device (1) configured to control an operation of said image pick up device (1) in synchronization with said timing signal (VD signal) of the exposure period (Col. 3, line 15 – 30). The timing pulse generator circuit 6 generates a shutter pulse which is synchronized with the VD signal generated by the sync. generator (5). Kokubo shows this in Fig. 4B in the first VD pulse. A shutter pulse is synchronized with the VD pulse.

- a timing part (5) configured to measure an elapsed time from the timing signal of the exposure period (Col. 4, line 54 – Col. 5, line 9);
- an imaging apparatus control part (5) configured to control said control part (6) for the image pick up device (1) and said setup part (5) for the exposure period (Col. 4, line 54 – Col. 5, line 9),
- wherein said timing part (5) measures the elapsed time from the exposure period timing signal (VD signal) right before a beginning of an exposure setup operation (trigger signal) to the beginning of the exposure setup operation (trigger signal) by said setup part (5) for the exposure period (charge accumulating time), and when a time from the beginning of the exposure setup operation (trigger signal) to a generation of a next exposure period timing signal (VD signal), the time being calculated by using the measured elapsed time (the count on counter 15 when the trigger signal is applied to the (5), is equal to or greater than a predetermined time (delay trigger signal from 21), said imaging apparatus control part (5) shortens the time till the generation of the next exposure period timing signal (VD signal) from a regular exposure period (VD signal) (Col. 5, line 34 – 52). Kokubo teaches that a counter (15) is in the sync. generator (5). This counter (15) creates the VD signal. In the real shutter mode, counter (15) is counting when the trigger signal is applied to terminal (18) of the sync. generator (5). The sync. generator (5) creates a delayed trigger signal through the variable delay circuit (21), which resets

the counter (15) and creates a VD signal earlier than the normal VD signal (Col. 5, lines 34 – 52). Examiner believes that when the trigger signal is created the counter (15 with in the sync. generator 5) has a value, which is calculated by way of a counted value. The variable delay circuit (21) creates a predetermined delay which in turn resets counter (15) and creates the early VD signal.

As to claim 2, Kokubo teaches the imaging apparatus according to claim 1, wherein said predetermined time (delay trigger signal from 21) is a time required for conducting the exposure setup operation (trigger signal) to said control part (6) for the image pick up device (1) (Col. 5, line 34 – 52).

As to claim 4, Kokubo teaches the imaging apparatus according to claim 1, wherein in order to shorten the time till the generation of the exposure period timing (VD signal), the exposure period timing signal (delay trigger signal from 21) is generated earlier than the regular exposure period (VD signal), right after the exposure setup operation (trigger signal) to said control part (6) for the image pick up device (1), and the exposure period (charge accumulating time) is thereby begun (Col. 5, line 34 – 52).

As to claims 5, 6, and 8, these claims differ from claim 1, 2, and 4 only in that claims 1, 2, and 4 are apparatus claims whereas claim 5, 6, and 8 are method. Thus method claims 5, 6, and 8 are analyzed as previously discussed with respect to claims 1, 2, and 4 above.

As to claims 9, 10, and 12, these claims differ from claim 1, 2, and 4 only in that claims 1, 2, and 4 are apparatus claims whereas claims 9, 10, and 12 cite a limitation of

a control program on a computer readable memory which provides the imaging apparatus the ability to provide the function of the claims 1, 2, and 4. Kokubo teaches a solid state imaging apparatus, which requires a processor to perform the functions of the CCD. (Col. 3, lines 49 – 52).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER K. PETERSON whose telephone number is (571)270-1704. The examiner can normally be reached on Monday - Friday 6:30 - 4:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NgocYen Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/764,438  
Art Unit: 2622

Page 7

CKP  
9 July 2008

***/Ngoc-Yen T. VU/  
Supervisory Patent Examiner, Art Unit 2622***